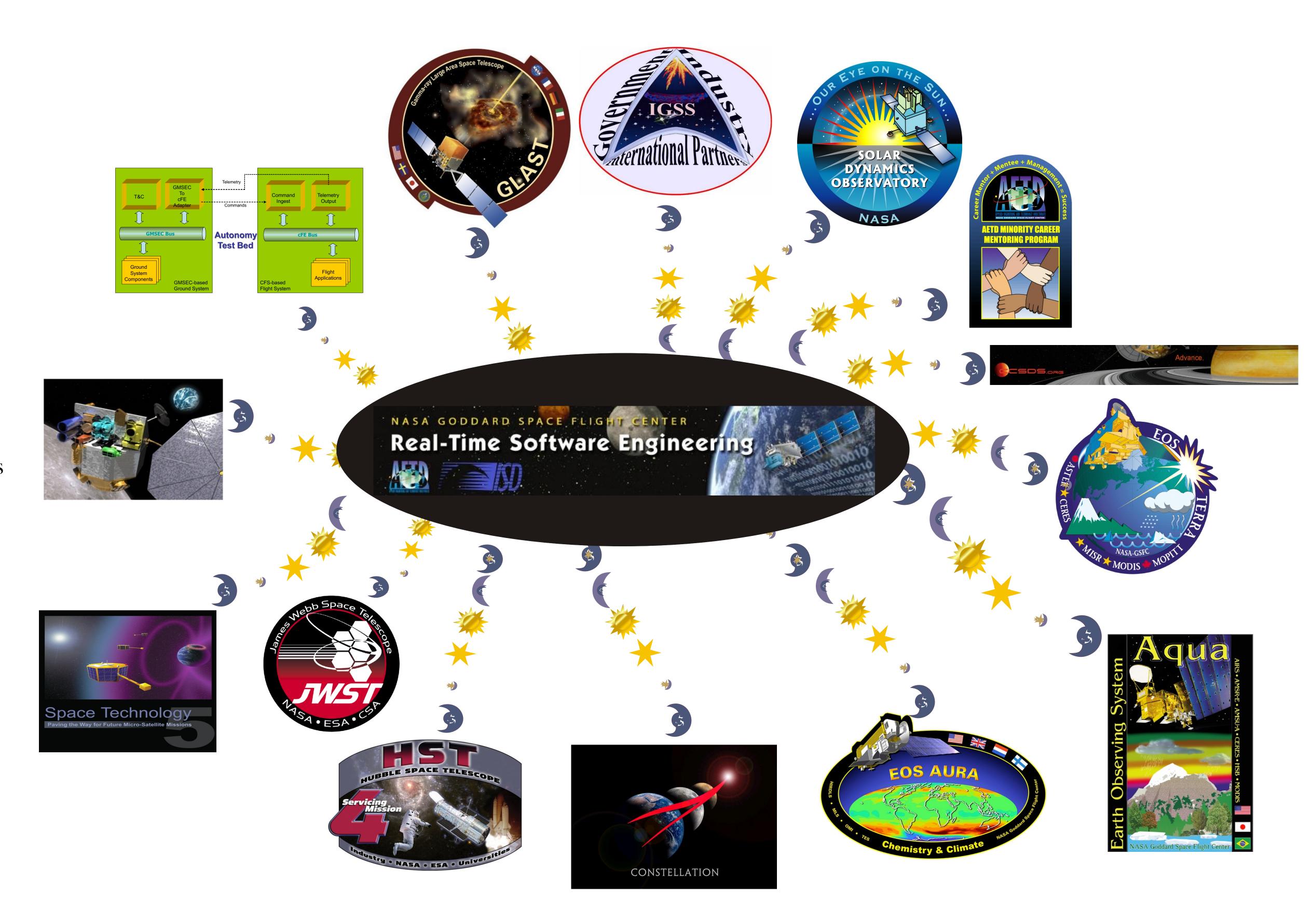# Code 584 - Real-Time Software Engineering

Code 584 is the sought-after provider of systems for testing, controlling, and monitoring the health and safety of spacecraft, spacecraft subsystems, constellations of spacecraft and Sensor-Webs.

EXPERTISE

- Develop and integrate in-house and commercial Telemetry and Command Systems and Ground Support Equipment software in support of:
  - Spacecraft and instrument Integration and Test (I&T) and Operations
  - FSW development

- Provide engineering expertise to flight projects and principal investigators to develop integrated hardware and software systems for real-time mission support

- Develop operations concepts for real-time systems in support of Exploration Missions and future NASA missions

- Develop capabilities for next generations command and control architecture:
  - Agent-based architecture allowing transportable SW from ground to flight
  - Goal-based operations
  - Inter-operable control of satellite systems
  - Predictive Model-based operations
  - Sensor-Webs
  - New/advanced test methods for distributed systems
  - Plug-n-Play autonomy components for mission automation

PRODUCTS

Telemetry and Command Systems

Advanced System For Integration And Test (ASIST)

http://asist.gsfc.nasa.gov

Integrated Test And Operations System (ITOS)

http://itos.gsfc.nasa.gov

Trending and Analysis Systems

Data Trending And Analysis System (DTAS)

http://radlab.gsfc.nasa.gov/DTASHome.html

Education and Outreach

Space Operations Learning Center (SOLC)

http://solc.gsfc.nasa.gov

Control Center in the Classroom (CCC)

http://ccc.gsfc.nasa.gov